

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-30: canceled

Claim 32: canceled

31. (currently amended): An organic light emitting device having an emissive layer comprising an organometallic compound, wherein the organometallic compound consists of

a metal having an atomic number of at least 72;

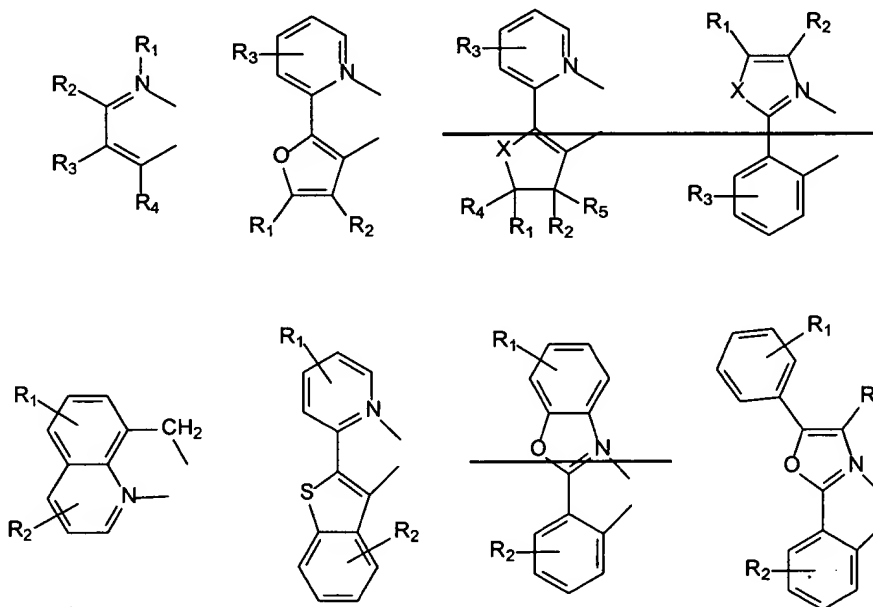
at least one mono-anionic, bidentate, carbon coordination ligand bound to the metal,

wherein the at least one mono-anionic, bidentate, carbon-coordination ligand is substituted with at least one of an electron donating substituent and an electron withdrawing substituent,

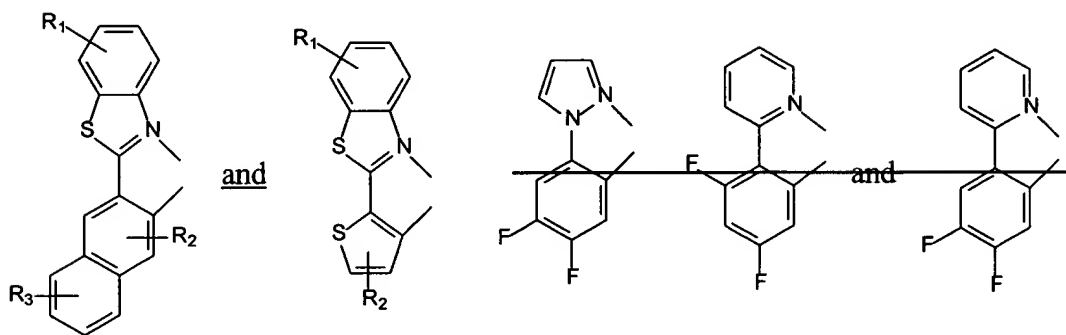
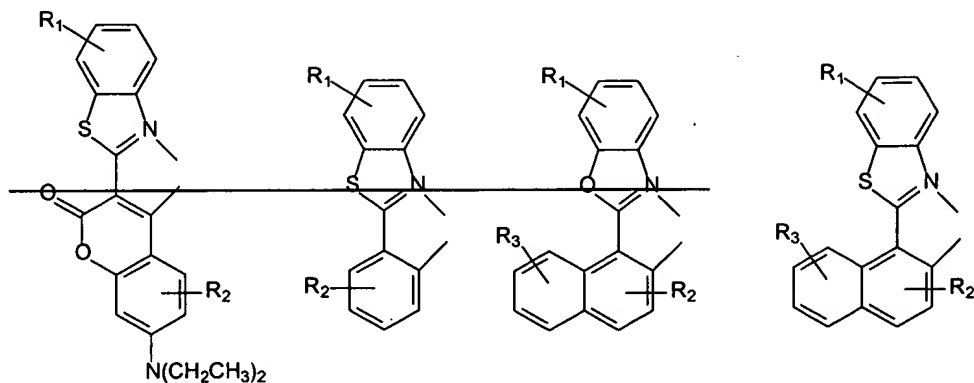
and

at least one non mono-anionic, bidentate, carbon coordination ligand bound to the metal,

wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



B



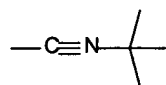
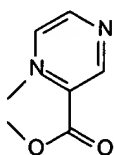
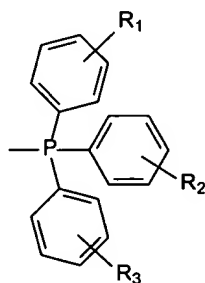
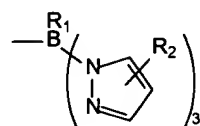
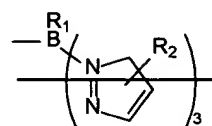
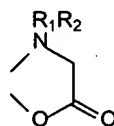
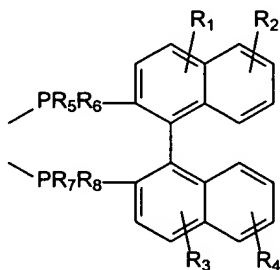
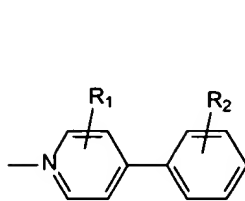
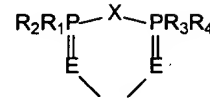
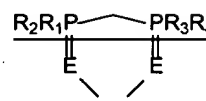
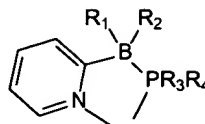
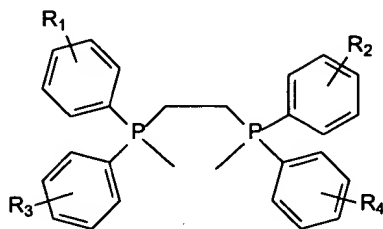
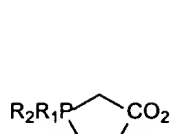
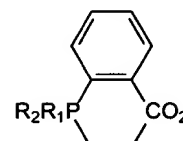
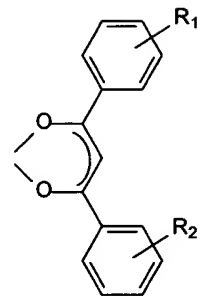
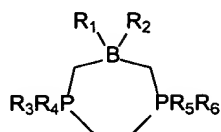
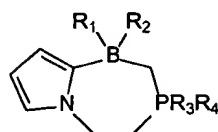
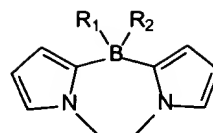
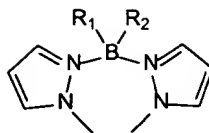
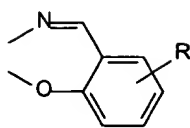
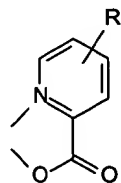
wherein ~~X~~ is S or O; and

R₁, R₂, R₃, R₄ and R₅ are, independently, hydrogen, halogen, alkyl, or aryl.

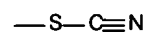
33. (currently amended): The organic light emitting device of claim 31, wherein the heavy metal is selected from the group consisting of Os, Ir, Pt and Au.

34. (currently amended): The organic light emitting device of claim 33, wherein the heavy metal is selected from the group consisting of Ir and Pt.

35. (currently amended): The organic light emitting device of claim 31, wherein the non mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



and



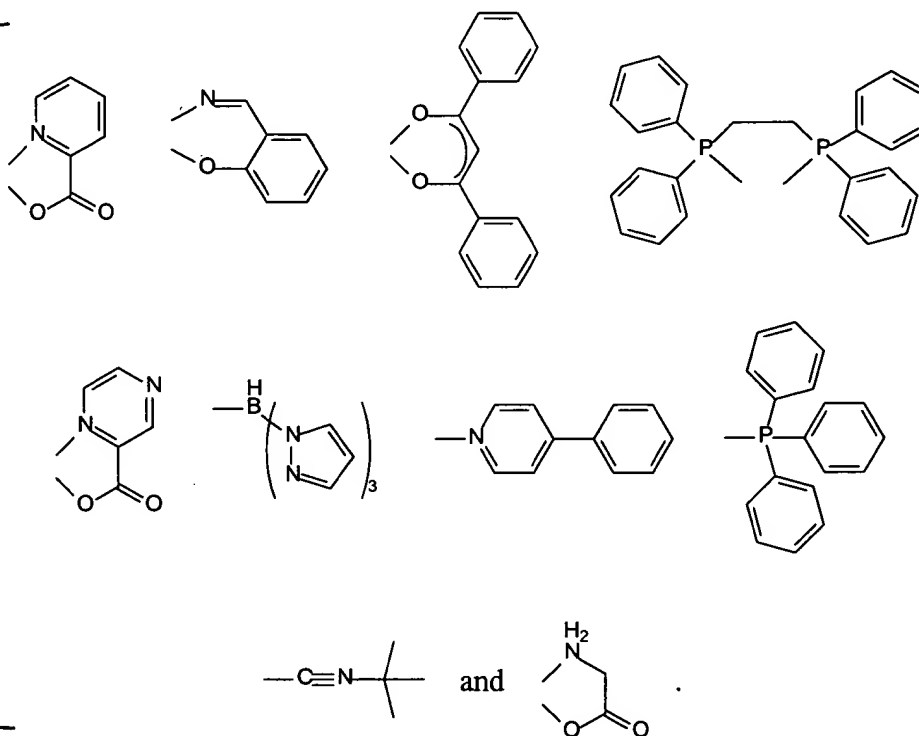
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wherein E is selected from the group consisting of O, S, Se and Te;

X is selected from the group consisting of CH and N; and

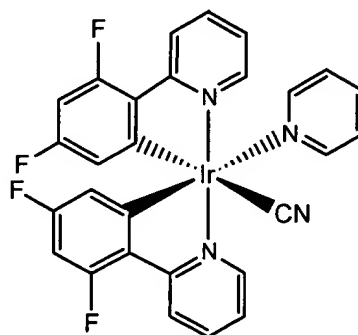
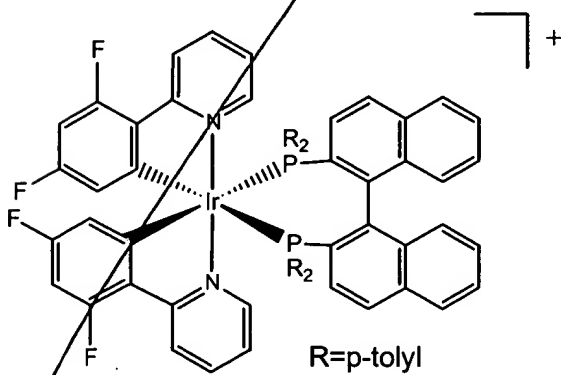
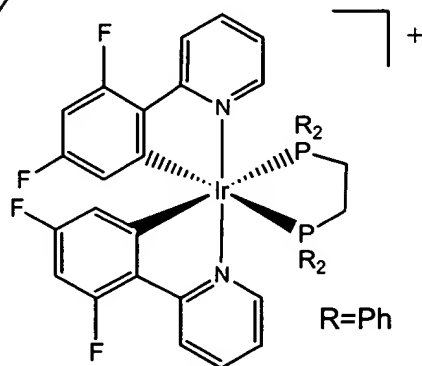
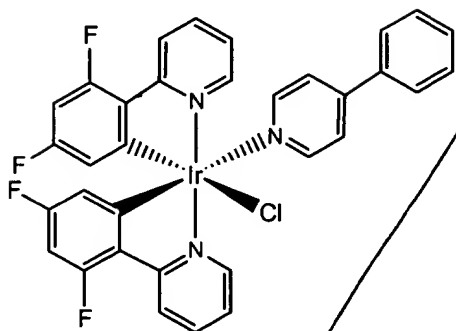
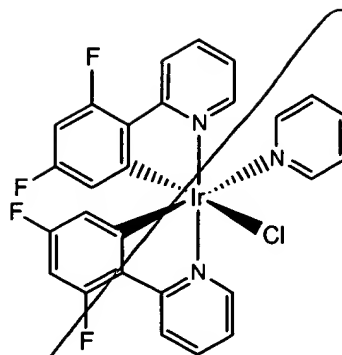
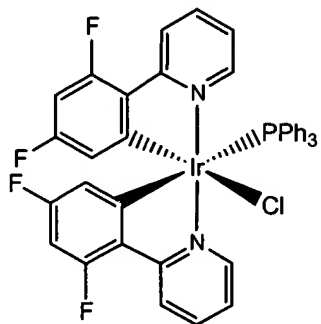
R₁, R₂, R₃, R₄, R₅, R₆, R₇ and R₈ are, independently, hydrogen, halogen, alkyl, or aryl.

~~36~~ (previously presented): The organic light emitting device of claim ~~35~~⁴, wherein the non mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



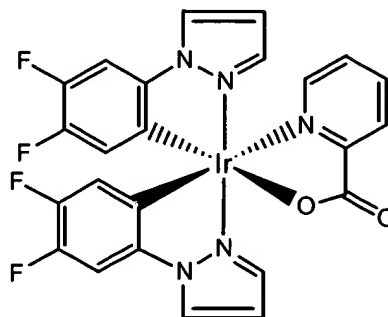
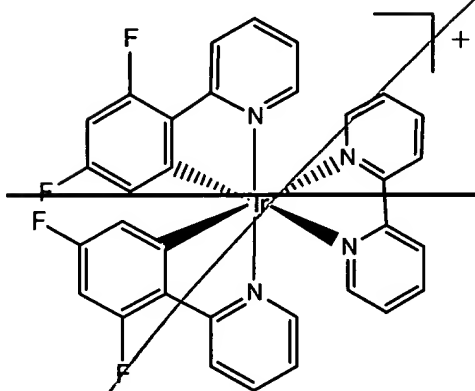
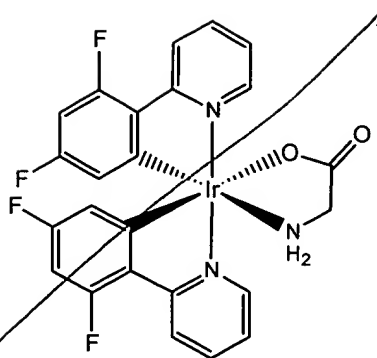
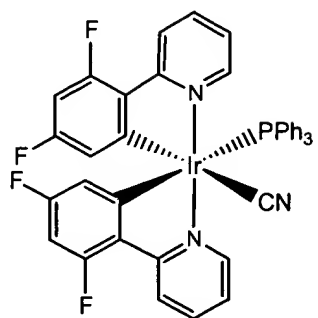
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37. (currently amended): The organic light emitting device of claim 31, ~~wherein the organometallic compound has the chemical structure represented by a formula selected from the group consisting of~~



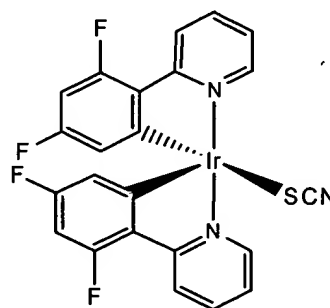
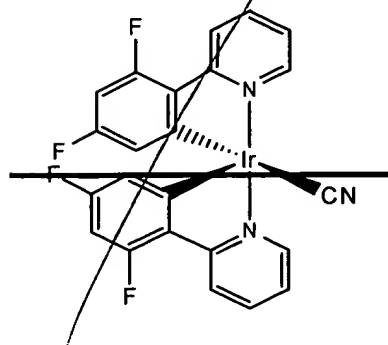
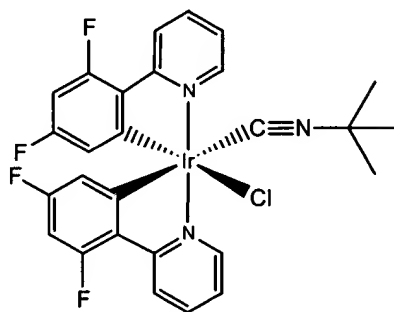
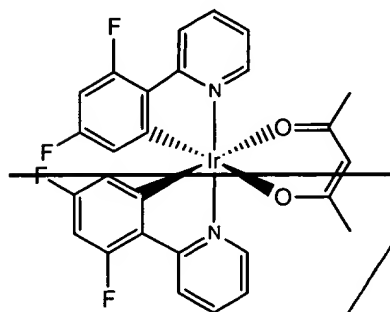
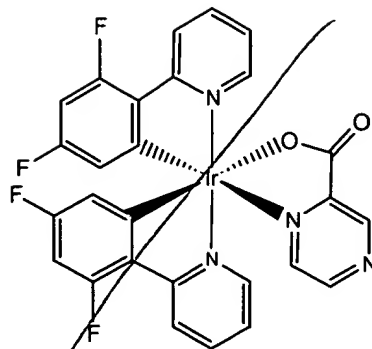
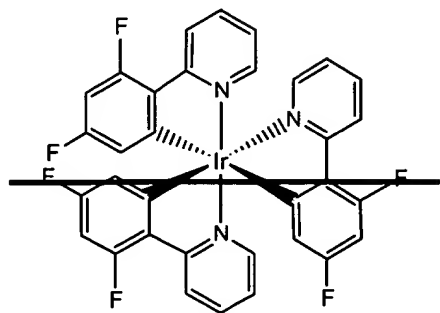
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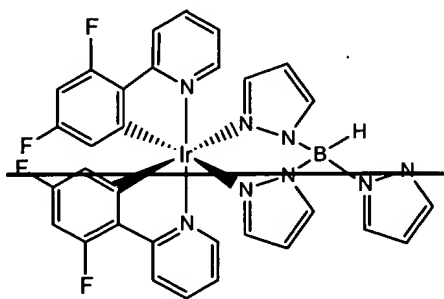
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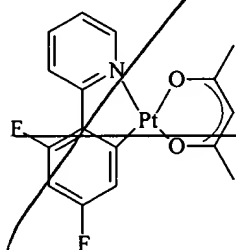
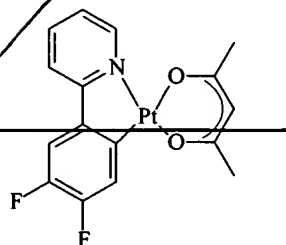
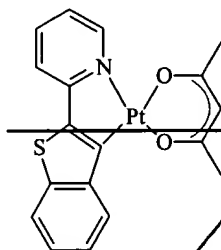
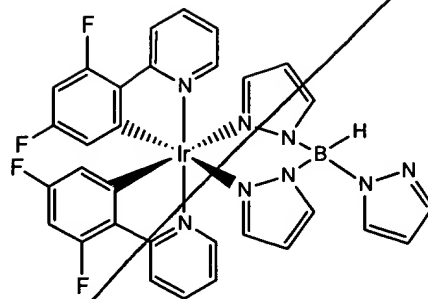
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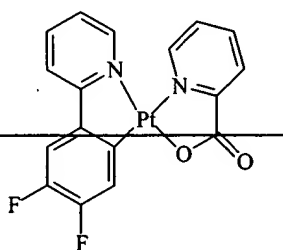




and



and



38. (previously presented): The organic light emitting device of claim 31, wherein the emissive layer further comprises:

a host material having a lowest triplet excited state having a first decay rate of less than about 1 per second; wherein the organometallic compound is present as a guest material dispersed in the host material, the organometallic compound having a lowest triplet excited state having a radiative decay rate of greater than about 1×10^5 per second and wherein the energy level of the lowest triplet excited state of the host material is lower than the energy level of the lowest triplet excited state of the organometallic compound.

39. (currently amended): The organic light emitting device of claim 38, wherein the energy difference between the lowest triplet excited state of the organometallic compound and a corresponding relaxed

stated state of the organometallic compound has a corresponding wavelength of about 420 nm to 480 nm for blue light emission.

⁸
~~40.~~ (currently amended): The organic light emitting device of claim ~~38~~⁶, wherein the energy difference between the lowest triplet excited state of the organometallic compound and a corresponding relaxed stated state of the organometallic compound has a corresponding wavelength of about 480 nm to 510 nm for aqua-blue light emission.

⁹
~~41.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein the host material has a bandgap with an energy difference corresponding to about 470 nm and the organometallic compound has a lowest triplet excited state at an energy level at about 450 nm.

¹⁰
~~42.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein the host material is an electron transport layer.

¹¹
~~43.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein the host material conducts electrons primarily through hole transmission.

¹²
~~44.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein the ratio of the host material and organometallic compound decay rates is at least about 1:1000 to about 5:1000.

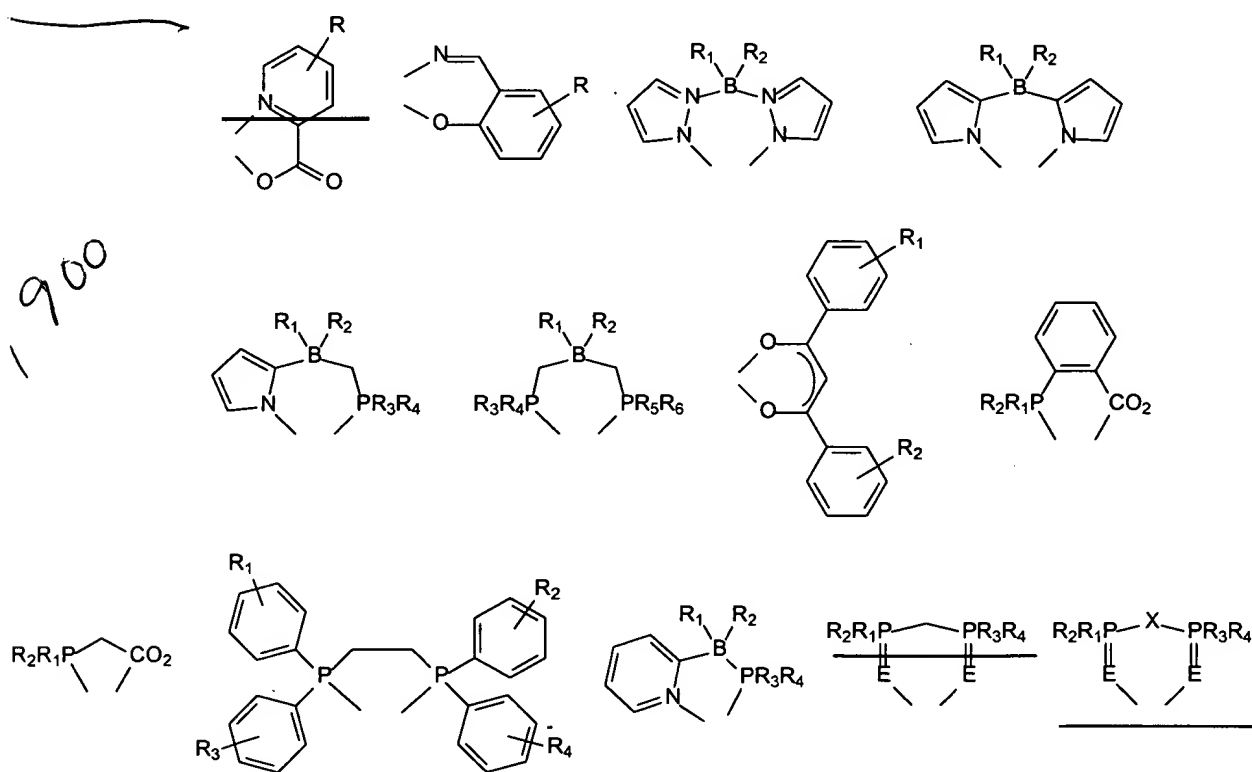
¹³
~~45.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein the host material is TPD.

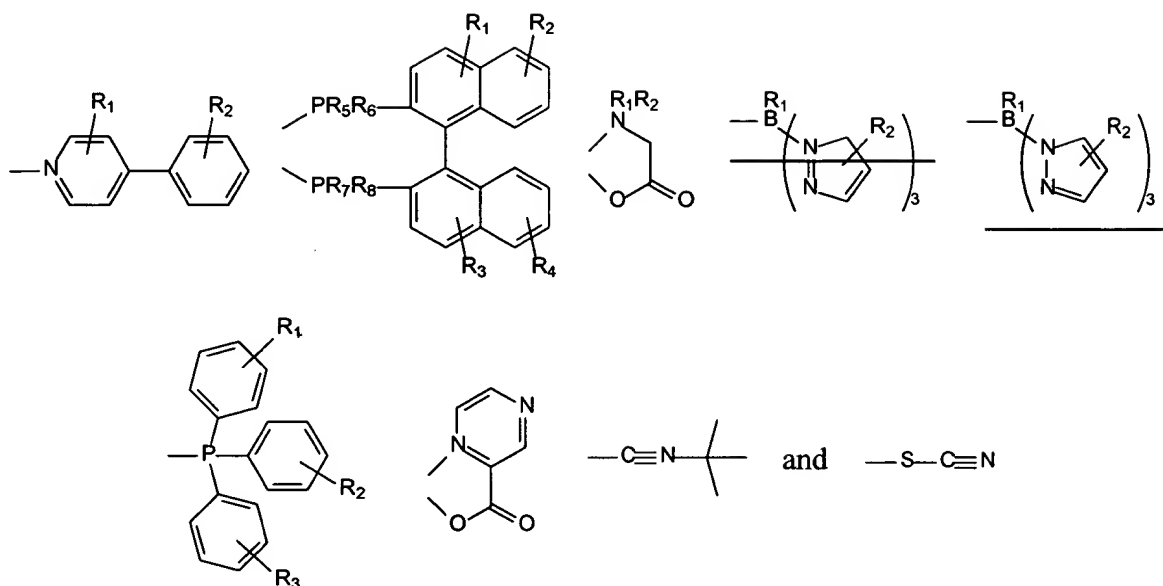
¹⁴
~~46.~~ (previously presented): The organic light emitting device of claim ~~38~~⁶, wherein a plurality of organometallic compounds are dispersed in the host material.

47. (currently amended): An organic light emitting device having an emissive layer comprising an organometallic compound, wherein the organometallic compound consists of

- a metal having an atomic number of at least 72;
- at least one mono-anionic, bidentate, carbon coordination ligand bound to the metal,
- wherein the at least one mono-anionic, bidentate, carbon-coordination ligand is substituted with at least one of an electron donating substituent and an electron withdrawing substituent;
- and
- at least one non (mono-anionic, bidentate, carbon coordination) ligand bound to the metal,

wherein the non-(mono-anionic, bidentate, carbon coordination) ligand is selected from the group consisting of



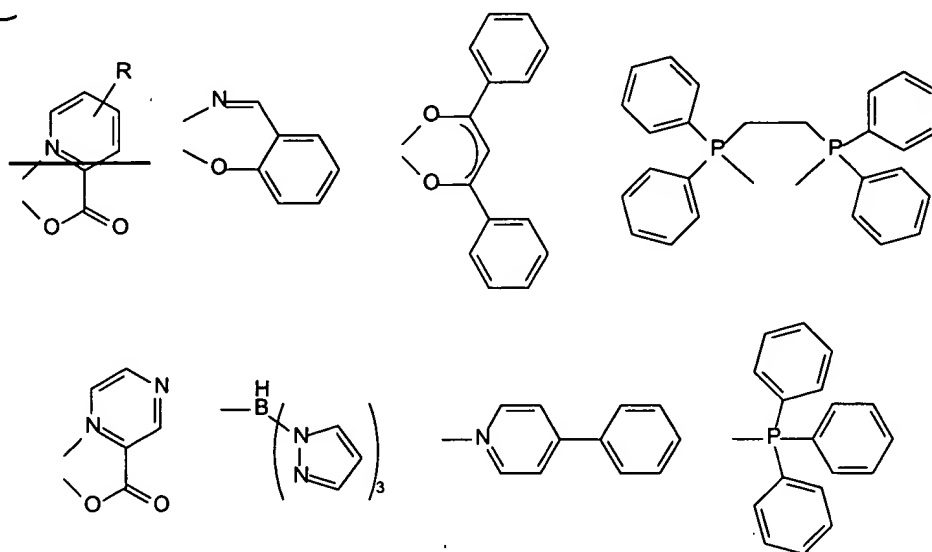


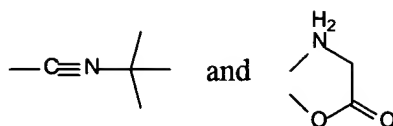
wherein E is selected from the group consisting of O, S, Se and Te;

X is selected from the group consisting of CH and N; and

R, R₁, R₂, R₃, R₄, R₅, R₆, R₇ and R₈ are, independently, hydrogen, halogen, alkyl, or aryl.

48. (currently amended): The organic light emitting device of claim 47, wherein the non mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of

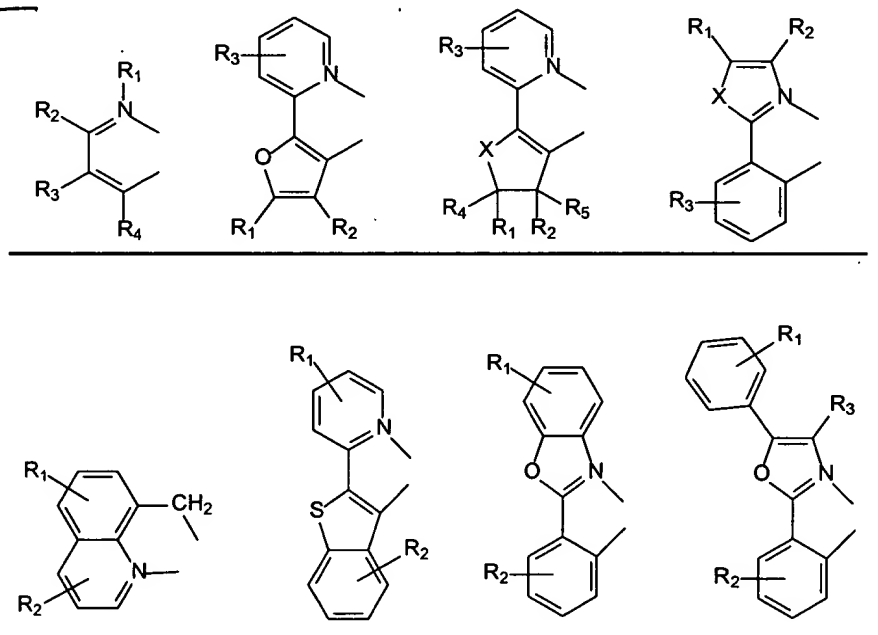




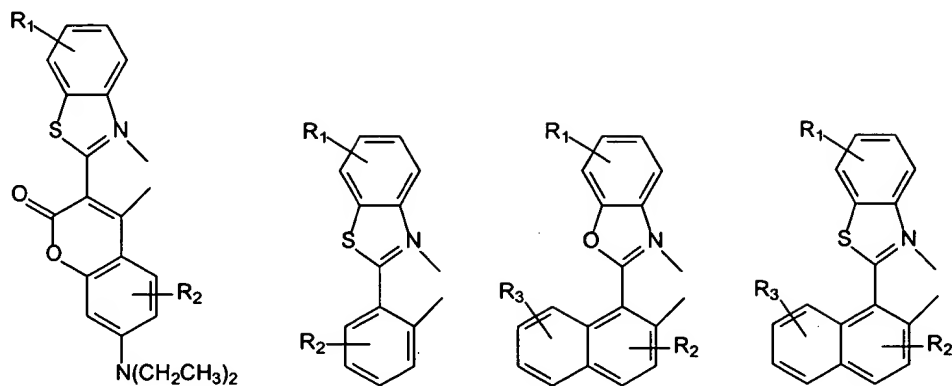
17/49. (currently amended): The organic light emitting device of claim 47, wherein the heavy metal is selected from the group consisting of Os, Ir, Pt and Au.

18/50. (currently amended): The organic light emitting device of claim 49, wherein the heavy metal is selected from the group consisting of Ir and Pt.

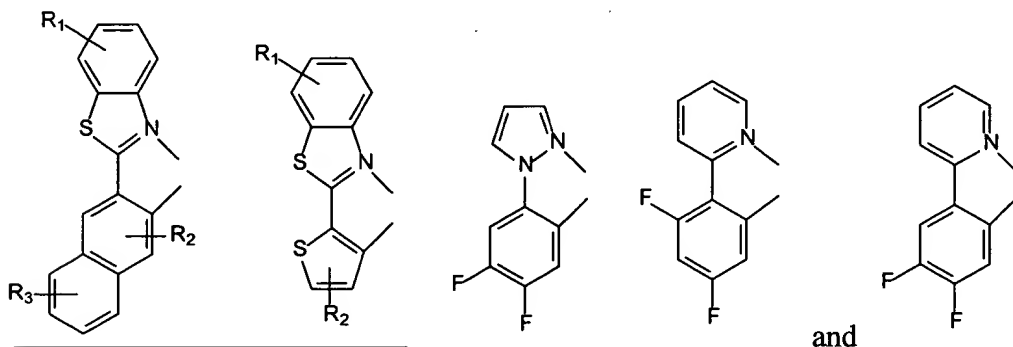
Bi Contd 19/51. (currently amended): The organic light emitting device of claim 47, wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



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and

wherein X = S or O; and

R₁, R₂, R₃, R₄ and R₅ are, independently, hydrogen, halogen, alkyl, or aryl.

Amendments to the Drawings

✓ The attached sheets of drawings include changes to Figures 5d, 6a, 6b, 6c, and 8d. These sheets replace the original Figures 5d, 6a, 6b, 6c, and 8d.

The chemical structures were amended to show the correct position of the double bonds. In Figure 5d the first structure is amended. In Figure 6a the fourth and fifth structures are amended. In Figure 6b the eighth structure is amended. In Figure 6c the thirteenth structure is amended. In Figure 8d the third structure is amended.

Attachment: Replacement Sheets
Annotated Sheet Showing Changes